

File in PTD Device

TID/TAB - 81/62
1 November 1962

MEMORANDUM FOR: Chief, Technical Intelligence Division

SUBJECT: Staff Study Concerning the Development of a
Point Transfer Device.

STATEMENT OF THE PROBLEM

It is requested that TP & DS obtain proposals from various manufacturers for the development of a high speed, precision, stereoscopic point transfer device.

THE FACTS

1. It is necessary to transfer and identify conjugate images from one exposure to the next in the solution of many photogrammetric problems, our present techniques are extremely crude and/or tedious. On production-runs points must be transferred manually and with poor accuracy.

2. TID/TAB does have a point transfer device known as the PUG-1 manufactured [] however, the PUG-1 is not adapted to production. It is extremely tedious to transfer conjugate images and once accomplished you cannot find the transferred point because of its size and lack of identification marker plus other deficiencies.

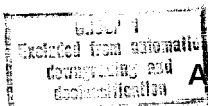
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RECOMMENDATION

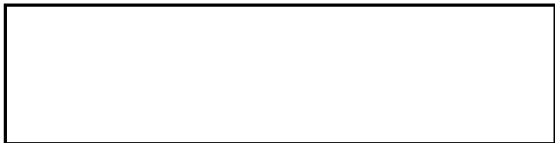
1. It is recommended, subject to approval of this Staff Study, that the development of the instrument incorporate the following functions.

- a. Capable of handling roll film from 70 mm to 9 inches in 250 ft. rolls.
- b. Permit the use of transparent and opaque materials.
- c. Transferred points to be 50 microns in diameter or smaller.

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- d. Points to be identified by circle or pointer.
- e. In order to use photography of various scales it is desirable that the instrument have a 1 to 10 zoom ratio with a maximum magnification of 50 and a minimum of 5.
- f. That material being viewed be held flat by vacuum.
- g. Must be a stereoscopic instrument, with precise floating dots to indicate point to be pierced or drilled, recovery accuracy to ± 10 microns.
- h. Rapid x and y coordinate scan speeds but must permit precise pointing of reference floating dots.
- 1. Both coordinate tables not to be less than 10" x 20".
- j. Apparent rotation of tables to be accomplished by rotating prisms - this eliminates the need for rotation of the table.
- k. The instrument must incorporate a method of keeping the operator oriented within the format of the photography.
- 2. It is recommended that contractors be solicited to submit proposals for the development of this instrument.


Chief, Technical Analysis Branch

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